January 15, 1976

HUMAN EXPOSURE INCIDENTS RELATING TO USE OF PESTICIDES CONTAINING PROPARGITE (OMITE AND COMITE)

Due to increasing numbers of pesticide illnesses (cases of dermatitis and eye irritation) occurring in persons working with the pesticides containing propargite (Omite and Comite), the California State Department of Health and the Department of Food and Agriculture began a worker safety evaluation of these products in mid-1974 and completed this in January 1976.

Considerable information was collected that related to this topic. Included was a study of Omite and Comite labels, labels of other miticides, pesticide illness reports relating to Omite and Comite for 1974 and 1975, excerpts from pesticide use reports, selected reprints and literature on propargarite, and summaries of conversations with 30 pest control advisors and pest control operators.

In our survey of pest control operators and pest control advisors, we focused on the mixer/loader and applicator exposure incidents. These have accounted for the vast majority of illnesses in the past; however, we were also concerned about the possibility of field worker exposures. We learned of several field worker exposures during 1974 and 1975 that involved Omite. These were investigated; although there were some suggestions of problems, since sulfur was almost always also on the crop to which the field worker was exposed, it was not possible to identify a field worker problem due to exposure to residues of propargite alone on plants.

Data taken from Department of Food and Agriculture Pesticide Use Reports indicates that Omite and Comite (these products are listed in the reporting

system solely under Omite) are used widely on numerous crops in California.

	NUMBER OF CROPS	NUMBER OF APPLICATIONS	POUNDS USED	ACRES COVERED
1973	22	6,601	498,705	315,343
1974	22	6,738	790,295	442,700
1975	21	5,462	641,988	324,598

Growers, pest control operators and pest control advisors in the lower San Joaquin Valley regard the products Omite and Comite as a very valuable miticide. For instance, when speaking of the mite problem in grapes in that area, it is the opinion of many that Omite is currently the most effective miticide available.

If Omite and Comite were not available as miticides, it was our observation that most of the logical replacements would be pesticides containing organophosphates with much greater hazards to mixers, loaders and applicators due to inhalation and dermal exposure.

Late in 1975, the State Department of Health took the position that propargite was a skin sensitizer and that products containing it should have registrations cancelled. The United Farm Workers Union, shortly thereafter, took the position that these products should not be used on farms where their union maintained contracts.

Pesticide illness reports studied for 1974 and 1975 years indicates sizable numbers dealing with Omite and Comite. A report prepared by the State

Department of Health, entitled "Summary of Human Occupationally-Acquired Illnesses Reported in 1974 by Physicians in California as Due to Exposure to Omite or Comite", listed some 36 incidents during 1974. As the exposure problems associated with these compounds are dermatitis and eye irritation, a greater number were expected to go unreported. During our survey in 1975 in the lower San Joaquin Valley, such a suspicion was borne out by speaking with a number of persons who had experienced skin and eye problems they attributed to exposure to Omite, but they did not seek treatment from a physician.

We studied incidents identified in the Health Department survey of the 1974 Omite/Comite illnesses. From this study, we determined that Omite was responsible for 30 cases; whereas, Comite was involved in only 3. A classification by occupation indicated that 24 ground applicators, 6 mixer/loaders, 3 field workers and 0 aerial applicators were involved in the reported incidents.

During our interviews of 30 pest control advisors and operators in the southern part of the San Joaquin Valley, we found that of 15 aerial applicators contacted, only two reported past single minor incidents relating to Comite. On the other hand, of the 12 ground applicators, 5 had experienced severe or repetitive illness problems related to Omite. It appeared that most of the ground applicators received their skin exposures while mixing and loading their vehicles, as a secondary job.

Even though the aerial application process may have certain safety advantages, such as having a mixer/loader and a separate applicator with little exposure of the applicator to spray mist, it appears that a more significant

reason for the freedom of incidents in the aerial application work category may be that most aerial applications of these products were generally made to cotton and using Comite rather than Omite.

Most field observation data seemed to indicate that Omite caused the major problem. More specifically, it appeared that the problems most often centered around Uniroyal's Omite 30 W.

Such data pointed to the need of either safeguarding this wettable powder from human contact by use of dissolvable containers, reducing its very dusty nature, or some other effective means or marketing only a liquid formulation. It appeared that such measures should drastically reduce exposures. Such effort could be fortified with uniform label categorization and explicit label warnings concerning dermal and eye hazards explicitly requiring face, eye and hand covering. There seemed to be some difference of opinion concerning the use of long-sleeved coveralls in warm weather when working with these products.

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